

3.1.7 2002 Carbon Dioxide Emission Coefficients for Buildings (10⁶ metric tons of carbon per quad) (1)

	<u>All Buildings</u>	<u>Residential Buildings</u>	<u>Commercial Buildings</u>
Coal			
Average (2)	25.74	25.74	25.74
Natural Gas			
Average (2)	14.40	14.40	14.40
Petroleum Products			
Distillate Fuel Oil/Diesel	19.75	-	-
Kerosene	19.52	-	-
Motor Gasoline	19.15	-	-
Liquefied Petroleum Gas	17.09	-	-
Residual Fuel Oil	21.28	-	-
Average (2)	19.04	18.80	19.53
Electricity Consumption (3)			
Average - Primary (4)	16.02	16.02	16.02
Average - Site (5)	51.58	51.58	51.58
New Generation			
Gas Combined Cycle - Site (6)	32.64	32.64	32.64
Gas Combustion Turbine - Site (6)	47.61	47.61	47.61
Stock Gas Generator - Site (7)	43.80	43.80	43.80
All Fuels (3)			
Average - Primary	15.64	15.51	15.81
Average - Site	30.69	28.67	33.27

Note(s): 1) Emissions assume complete combustion from energy consumption, excluding gas flaring, coal mining, and cement production. The combustion of fossil fuels produces carbon in the form of carbon dioxide and carbon monoxide; however, carbon monoxide emissions oxidize in a relatively short time to form carbon dioxide. 2) Coefficients do not match total emissions reported in the AEO 2004 and were adjusted using Assumptions to the AEO 2004. 3) Excludes electricity imports from utility consumption. Includes nuclear and renewable (including hydroelectric) generated electricity. 4) Use this coefficient to estimate carbon emissions resulting from the consumption of energy by electric generators. 5) Use this coefficient to estimate carbon emissions resulting from the consumption of electricity by end-users. 6) Use this coefficient to estimate emissions of the next-built (2003) natural gas-fired, electric generator resulting from the consumption of electricity by end-users. 7) Use this coefficient to estimate emissions of existing natural gas-fired, electric generators resulting from the consumption of electricity by end-users.

Source(s): EIA, AEO 2004, Jan. 2004, Table A2, p. 134-136, Table A8, p. 145-146, Table A18, p. 157 for consumption and Table A19, p. 158 for emissions; EIA, Assumptions to the AEO 2004, Jan. 2004, Table 2, p. 8 for coefficients and Table 48, p. 84 for generator efficiencies; EIA, Annual Energy Review 2002, Oct. 2003, Diagram 5, p. 219 for T&D losses.